### (12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

## (19) World Intellectual Property Organization

International Bureau



# 

(43) International Publication Date 30 September 2004 (30.09.2004)

**PCT** 

#### (10) International Publication Number WO 2004/084337 A1

(51) International Patent Classification7: 1/213, 1/209, 5/12

H01P 1/02,

(21) International Application Number:

PCT/EP2004/050313

(22) International Filing Date: 16 March 2004 (16.03.2004)

(25) Filing Language:

English

(26) Publication Language:

English

(30) Priority Data: 0303583

20 March 2003 (20.03.2003)

(71) Applicant (for all designated States except US): THOM-SON LICENSING S.A. [FR/FR]; 46, Quai Alphonse Le Gallo, F-92100 Boulogne-Billancourt (FR).

(72) Inventors; and

(75) Inventors/Applicants (for US only): CHAMBELIN, Philippe [FR/FR]; 14 rue du Plessix d'Essé, F-35410 CHATEAUGIRON (FR). LOUZIR, Ali [TN/FR]; 6 rue de la Godmondière, F-35000 RENNES (FR). FOURDEUX, Henri [FR/FR]; La Saudrais, F-35150 CORPS-NUDS (FR).

(74) Agents: COUR, Pierre et al.; THOMSON, 46, Quai Alphonse Le Gallo, F-92100 Boulogne-Billancourt (FR).

(81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

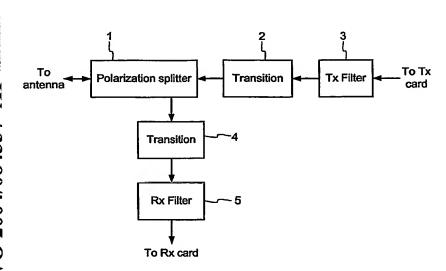
(84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

#### Published:

with international search report

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) Title: WAVEGUIDE FREQUENCY-BAND/POLARIZATION SPLITTER



(57) Abstract: The invention proposes an optimized solution of frequency/polarization splifter that requires no adjustment after production and can be produced entirely by moulding. The polarized-wave splitter comprises various components, including a polarization splitter 1 coupled to two filters 3 and 5 via transition regions 2 and 4. The overall dimensions of the various components are such that the transfer characteristics of the splitter are better than the characteristics resulting from the sum of the characteristics of the components constituting the splitter.